

Claims

1. A pressure sensitive adhesive composition comprising a rubbery elastomeric matrix and one or more amphiphilic block copolymers containing one or more hydrophobic polymer blocks, and one or more hydrophilic polymer blocks.
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2. The pressure sensitive adhesive composition according to claim 1, characterized in that the rubbery elastomeric matrix is a matrix of one or more block-copolymers forming a physically cross-linked matrix.
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3. The adhesive composition according to any of claims 1-2, characterized in that the amphiphilic block copolymer contains hydrophobic blocks compatible with the rubbery elastomeric base of the adhesive.
- 15 4. The adhesive composition according to any of claims 1-3, characterized in that the rubbery elastomeric matrix has inherent adhesive properties, or said rubbery elastomeric matrix contain a tackyfier resin and /or a plastiziser which provide or improve the adhesive properties of the composition.
- 20 5. The adhesive composition according to claim 4, characterized in that the rubbery elastomeric matrix has intrinsic adhesive properties.
6. The adhesive composition according to any of claims 4-5, characterized in that the rubbery elastomeric matrix contain a tackyfier resin and /or a plastiziser
25 which provide or improve the adhesive properties of the composition.
7. The adhesive composition according to claim 2, characterized in that the rubbery elastomeric matrix is selected from block-copolymers comprising one or more styrene blocks.
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8. The pressure sensitive adhesive according to any of claims 1 or 2 characterised in that the rubbery elastomeric matrix comprises polybutylenes or polyisobutylene.
- 5 9. The pressure sensitive adhesive according to any of claims 1 or 2 characterised in that the rubbery elastomeric matrix comprises poly siloxane.
- 10 10. The pressure sensitive adhesive according to any of claims 1 or 2 characterised in that the rubbery elastomeric matrix comprises an amorphous poly alfa-olefine.
- 15 11. The pressure sensitive adhesive according to any of claim 1 or 2 characterised in that the rubbery elastomeric matrix comprises a polymer derived from polyacrylic acid.
- 20 12. The adhesive composition according to claim 7, characterized in that the rubbery elastomeric matrix is selected from block-copolymers comprising styrene and one or more dienes, preferably butadiene, isobutylene and isoprene.
- 25 13. The adhesive composition according to any of claims 1-12, characterized in that the hydrophilic block(s) has a molecular weight of at least 1000, at least 10.000, at least 20.000, or preferably at least 30.000.
- 30 14. The adhesive composition according to any of claims 1 or 13, characterized in that in the amphiphilic block copolymer, the hydrophobic block(s) is prepared from identical monomer units or essentially identical monomer units, and the hydrophilic block(s) is prepared from identical monomer units or essentially identical monomer units, or the hydrophilic block(s) is prepared from different monomer units.
15. The adhesive composition according to claim 14, characterized in that the hydrophilic block(s) is prepared from different monomer units.

16. The adhesive composition according to claim 14 characterized in that the hydrophobic block(s) is prepared from identical monomer units or essentially identical monomer units, and the hydrophilic block(s) is prepared from identical monomer units or essentially identical monomer units.

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17. The adhesive composition according to any of claims 1 and 13 characterized in that in the amphiphilic block copolymer, the hydrophobic block(s) is prepared from different monomer units, and the hydrophilic block(s) is prepared from different monomer units.

10 18. The adhesive composition according to claim any of claims 1 and 13 to 17, characterized in that the amphiphilic block copolymer(s) is a diblock having the structure AB or a triblock having the structure ABA, preferably a triblock ABA.

15 19. The adhesive composition according to any of claims 1, 7 and 12 to 18, characterized in that the amphiphilic block copolymer contains one or more styrene blocks.

20 20. The adhesive composition according to any of claims 1, 11 and 13 to 18, characterized in that the amphiphilic block copolymer contains one or more acrylic hydrophobic blocks

25 21. The adhesive composition according to any of claims 1, 8, 10 and 13 to 18, characterized in that the amphiphilic block copolymer contains one or more blocks from a vinylic unsaturated aliphatic hydrocarbon comprising from 1 to 6 carbon atoms.

22. The adhesive composition according any of claims 1, 13 and 14 and 16, characterized in that the hydrophilic block of the amphiphilic block copolymer is a polyethylene oxide or a polyethyleneglycol.

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23. The adhesive composition according any of claims 1,13 to 14 and 16, characterized in that the hydrophilic block of the amphiphilic block copolymer is a hydrophilic polyacrylate.

5 24. The adhesive composition according any of claims 1,13 to 14 and 16, characterized in that the hydrophilic block of the amphiphilic block copolymer is a hydrophilic polyvinyl compound, preferably polyvinyl pyrrolidone.

10 25. The adhesive composition according to any of claims 1, 13-15 and 17, characterised in that the hydrophilic block(s) of the amphiphilic block copolymer is a copolymer prepared from monomers selected from acrylic acid, maleic acid, hydroxyethylmethacrylate (HEMA), vinylpyrrolidone (NVP), polyethyleneglycol(meth)acrylate, ethoxypolyethyleneglycol(meth)acrylate, methoxyethyl(meth)acrylate, ethoxy(meth) acrylate, 2-dimethylamino-15 ethyl(meth)acrylate (DMAEMA) and 3-dimethylaminopropylmethacrylamid (DMAPMA).

26. The adhesive composition according to claim 1-12, characterized in that the amphiphilic block copolymer is an amphiphilic polyurethane.

20 27. The adhesive composition according to any of claims 1-26, characterized in that it comprises one or more hydrophilic homopolymers or heteropolymers being compatible with the hydrophilic blocks of the amphiphilic block copolymer.

25 28. The adhesive composition according claim 27, characterized in that it comprises a homopolymer of polyethylene oxide.

30 29. The adhesive composition according to claim 27, characterized in that the hydrophilic homopolymer and the hydrophilic block of the amphiphilic copolymer are hydrophilic polyacrylates.

30. The adhesive composition according to claim 27, characterized in that it comprises a plasticizer being compatible with the hydrophilic phase.
31. The adhesive composition according to any of claims 1-30, characterized in that it comprises hydrocolloid particles.
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32. The pressure sensitive adhesive according to claim 1 wherein the amphiphilic block copolymer is a di-block comprising polystyrene and polyethylene oxide, a tri-block comprising two polystyrene blocks and one midblock of polyethylene oxide, or a di-block comprising poly(butadiene(1,4 addition) and sodium polyacrylate.
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33. The pressure sensitive adhesive according to any of claims 1-32 characterized in that it contains an active ingredient, such as a pharmaceutically active ingredient.
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34. The pressure sensitive adhesive according to claim 33 characterized in that the active ingredient is an antibacterial agent.
- 20 35. The composition according to any of claims 1-34 in the form of foam.
36. A wound dressing wherein the skin facing surface and/or the body of the wound dressing is made of a pressure sensitive composition according to claims 1-35.
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37. A medical device adapted for being attached to the skin of a human comprising a pressure sensitive adhesive composition according to claims 1-32 at the surface, which is to be attached to the skin.
- 30 38. A medical device according to claim 37, which is an adhesive wafer for ostomy appliances.

39. A pressure sensitive composition according to any of claims 1-34 characterized in that it is obtainable by hot melt a process involving mixing and heating the rubbery elastomeric matrix and the amphiphilic block copolymer(s) as well as optional additional ingredients in a mixer.